

## **Atoms for peace after 50 years**

### **Panel 2: “Evaluating and communicating risks and benefits”**

**Saclay, 22-24 July 2003**

***Question : what measures show the greatest promise for increasing institutional trust among important stakeholders, including the investment community and the environmental community?***

*Yves Le Bars, Andra chairman of the board, EDRAM chairman, OECD/NEA/FSC chairman*

#### **1/ To understand better the current situation**

##### **We have to recognise we are in a new context :**

In the context of abundance for generations that were not confronted with major conflicts, even if civilian nuclear activities are considered useful for the services they provide and may be deemed acceptable in relation to the risks they generate, the fact remains that appropriate decisions must be made to ensure their development. Among the numerous conditions to be met in order to guarantee the feasibility of those decisions, we feel that an essential condition is to get from the industry a sound understanding of the objectives at stake and reach public support for the implementation of proposed solutions.

##### **The gap that exist in the case of radioactive waste**

We must recognise the gap that exists between what the experts claim about radioactive-waste management and what public opinion believes.

*A technical analysis* shows that solutions exist and are implemented. In France, for example, 95% of the total volume of generated waste (low-level and intermediate-level short-lived waste) are already disposed of permanently in a surface facility (*Centre de l'Aube*)<sup>0</sup>. A new surface disposal facility will be commissioned later in 2003 to accommodate very-low-level (VLL) waste resulting from dismantling operations.

And a process has been launched in accordance with the Law of December 1991 to define solutions for the long-term management of high-level long-lived waste that is currently stored in a safe location.

*However*, for 60 % of the French public (BVA 2000), radioactive waste is not managed properly; 65% also believe that the truth is kept from them and 5% would agree to live beside a disposal facility (against 19% who would accept to live beside a nuclear power plant). Those positions are rather uniformly common throughout Europe, except for Swedish and Finnish citizens who have more confidence in their companies and institutions (Eurobarometer 2001).

*A qualitative analysis*, conducted by CRÉDOC at Andra's request, completes those data on radioactive-waste management. It shows that radioactive-waste management does not constitute a major concern and comes behind global threats, insecurity and even some industrial risks. The blurred preoccupation induced by that waste is mitigated whenever people know that a public organisation is in charge.

Radioactive waste does not have a good reputation and, in any case, inferior to that of nuclear power plants. When an individual or a group is interrogated, the spontaneous response is usually

rejection. The issue is normally denied or the blame is shifted unto others, such as the industry or the government, with an attitude of a “demanding but non-committed consumer”.

Continuity and openness are necessary in order to see a willingness of implication in the search of relevant solutions.

**On a broader scale, what is the reputation of nuclear energy and how is risk understood?**

In France, the Institute for Radiological Protection and Nuclear Safety (*Institut de radioprotection et de sûreté nucléaire* – IRSN) issues a yearly report on the perception of risk and safety. The reactions of the public to the different types of risk are examined with the utmost care in the methodology of the questions included in the survey. Hence, to the question “**According to you, what is strongest argument against nuclear energy today?**» the responses were as follows:

- The Chernobyl accident: **39%**.
- The lack of transparency in the nuclear industry: **23%**.
- Nuclear waste: **21%**.
- The vulnerability of nuclear facilities: **15%**.
- Don’t know : **2%**

I am proud to note that they were 40% to quote Nuclear waste in 1999, when I was appointed as chairman of Andra! The gap is reducing...

Transparency comes now before nuclear waste. An accident, such as the one that occurred in Chernobyl, is always considered possible for more than half the people surveyed. Furthermore (IRSN 2001), “considering the possibility of a nuclear accident in France”, 70% of the individuals surveyed felt that “French authorities would not be able to ensure the protection of the population”, compared to 58% in 2000 and 1996. Such a difference is probably due to the fear of terrorist threats.

In a study prepared for the French Electricity Industry Employers’ Association (*Union française de l’électricité* – UFE), J. Jaffré, Director of CECOP, noted :

A gradual decline in the acceptance of nuclear energy in France between 2002 and 2003.

Younger generations are more hostile and renewable energies are considered to generate fewer risks...

He also observed that nuclear energy appeared as a product of “French upper classes” and as a form of imposed energy.

However, a sense of reality prevails: French citizens consider that a sound management is impossible without it and that we must carry on...

**Note.** My opinion is that radioactive waste does not constitute the weak point of the nuclear industry, as it has been said so many times before: the true weakness of the nuclear industry lies more with its capability for dialogue in today’s society that has greatly evolved since the Cold War or periods of large shortages.

**2/ Something has to be repeated :** every nuclear organisation must truly and concretely *inform* the public on its activities and on the objectives of its activities. Such a situation is already difficult to achieve, as we have seen in France where the different goals of Électricité de France (EDF), the electrical utility, and of the AREVA Group have not been very obvious. The publication of the four years contracts between the State and public organisations, like Andra in France, constitutes significant milestones. Efforts dedicated to exchanges with the Safety Authority (*Autorité de sûreté*), which is

specifically responsible for risk negotiations in society, must not impede the broad and direct information of all publics.

**3/ Understanding the fears** and the expectations of the public is essential. Too often we tend to forget the gap that I have mentioned before. We talk about the irrational reactions of the public, but are we so sure about the soundness of our own? I start with the hypothesis that ***the public has understood that we have not understood what the public already has***, that is, that radioactive waste constitutes a specific risk that may disqualify or ruin entire areas for a long period of time. After most chemical accidents, it is possible to return safely on the site within 10 minutes, but it will take 150 years at Chernobyl where the site will remain useless. Belarusians suffer today from such a territory marking : the social deterioration (loss of the health system, in particular) following the bad image of the affected territories may have a stronger impact than direct health consequences of residual radioactivity.

An important observation to be mentioned is that ***there is no common understanding*** of the phenomena inducing the risks associated with radioactivity and the impact of low doses. The situation is quite obvious in the case of radioactive waste. In such a context, it becomes difficult to negotiate how to manage a risk within a society that does not even share a minimum consensus on the origin of that risk. In my experience in “flood-risk” negotiations, I realised that it is only when people are more or less aware about what increases or reduces a risk (impermeabilisation, edges, dykes, etc.) that a real discussion on potential solutions becomes possible.

It is therefore a very important task for the scientific community, and particularly for epidemiologists and radiation protection officers, to develop a common understanding. The example of the Nord Cotentin radio protection study, carried out with all stake holders, could be followed (see IRSN).

**4/** It is important to improve certain elements that ensure **the credibility of the actors** and help to **build confidence** (see FSC), as follows:

- The respective ***roles of the actors*** must be clear, known and recognised. Their autonomy must be real (for example the autonomy of Andra versus CEA or EDF...) in respecting the role of public authorities. There is a need for ***neutral debating and discussing locations*** that are not controlled by the major actors: symposia, public inquiry organisations, scientific and technical centres, assessment offices (such as the Danish Board of Technology and the various tools it uses from panels to citizen conferences).
- ***Work procedures*** for the preparation and implementation of decisions must be set up. As it is already the case in several countries, including France, those procedures need to be well defined in specific laws (Bataille law 1991), according to a quasi-standard process allowing the study of various alternatives within the framework of an independent assessment and of pre-established steps.  
It is also the answer to the investment community concerns : the long term liabilities could be clearly delimited as the result of such process.
- The ***behaviour of actors*** must reflect openness, availability and the strict observance of the limits of their own roles, not infringing on the responsibilities of political authorities on a subject for which the political dimension has in fact been broadened...

**5/** Radioactive-waste management and **the ultimate location of new activities** (such as new power plants) perceived as risk-inducing operations are issues confronting developed societies who have a tendency to relocate those activities elsewhere, however important they might be.

It is worthwhile noting France's ambition in that respect, as the only country to manage its radioactive waste *in non-nuclear sites*, where nuclear energy was totally unknown before (Soulaines, Bure). Such an approach involves continuity in the pedagogy adopted and over time.

We must assess and improve procedures to locate risk-inducing activities by integrating them over the long term and ensuring that an "all-win situation" will result for all stakeholders. Providing development opportunities are not bribery... Three guaranties has to be given to the local communities in the siting process : safety first, then opportunities of local development, and an open debate.

### **Conclusion,**

From what I have just explained, it is clear that we are quite far from what communication actually means, for example, when buying advertising spaces, but that we are rather dealing with the building confidence in nuclear actors. Nuclear energy is but one of the broader issue concerning the relationship between science and technology, on one side, and society and democracy, on the other. However, the conditions prevailing at the outset of nuclear energy during the Second World War and during the following shortage period slows down and complicates its adaptation. It requires the actors themselves to accept significant cultural changes. Is it likely that new generations will feel responsible enough to adopt them in the future?